## STATEMENT OF CONSIDERATIONS

ADVANCE WAIVER OF THE GOVERNMENT'S U.S. AND FOREIGN PATENT RIGHTS IN INVENTIONS MADE BY THE SARNOFF CORPORATION IN THE PERFORMANCE OF LLNL'S SUBCONTRACT NO. B513201 UNDER DOE'S NONPROLIFERATION RESEARCH AND ENGINEERING PROGRAM

DOE WAIVER No. W(A)-01-015, (SAN 687)

The Petitioner, the Sarnoff Corporation, a subsidiary of SRI International, has submitted a petition for an advance waiver of the Government's domestic and foreign rights to inventions made during performance of the above cited Subcontract.

Background: DOE's Nonproliferation Research and Engineering Program (NN-20) has provided the University of California (UC), Management and Operator of the Lawrence Livermore National Laboratory (LLNL) under Contract No. W-7405-ENG-48, approximately \$770,000 in FY 2001 funding for accomplishment of the Sonoma Project. This particular Project is involved with remote based sensor work for the purpose of nuclear nonproliferation. Although LLNL was successful in developing a prototype broad area laser conjugator (BALC) device suitable for this purpose, NN-20 recognized that further manufacturing /engineering expertise would be required to reduce such prototype to a commercial product capable of routine fabrication. Accordingly, LLNL issued a Request for Quotations (RFQ) on January 26, 2001, and the Sarnoff Corporation responded with proposal No. 2000959 to perform this work on February 28, 2001. After some initial negotiations, Sarnoff was selected as the sole source and Subcontract No. B513201 was entered into between UC and the Petitioner on or about April 02, 2001 for the amount of \$225,400. The Subcontract's statement-of-work calls for Sarnoff to perform preliminary studies until DOE grants a patent waiver, based upon the subject petition for an advance waiver, attached hereto as Enclosure 1. Such wavier petition, which was submitted on May 14, 2001, is required in accordance with 10 CFR 784.4 because the Sarnoff Corporation is a large business entity.

Analysis: Subcontract No. B513201 involves the fabrication, on a best effort basis, of at least eight BALC devices in accordance with a geometry provided by LLNL. The goal is to demonstrate production of the broad area device with a transverse resonator structure - ie. to prove the feasibility of manufacture of the electronic component and to reduce its cost. Sarnoff's expertise lies in matters related to "stack reflectors and strain compensation for the purpose of forming stack reflectors in semiconductor materials in combination with broad area diode lasers." Under this first production effort, the devices will be mounted and wire bonded on a C-block or chip carrier and LLNL will remain responsible for their basic packaging. Upon delivery and inspection of the ordered devices, the Laboratory may request that additional devices be produced from the residual materials, which would be processed under a separate follow-on subcontract. It is intended that these initial BALC's will be benchmark type devices and that optimization will be accomplished in later development stages.

Formerly RCA Laboratories, the Petitioner has worked in the area of photonics research since Sarnoff Corporation's inception in 1987. According to their petition, Sarnoff has invested in excess of \$20 million dollars in the telecommunications area including activities in the advanced laser and opto business relating to high frequency data rate and high-speed transmission applications. Although BAL devices are commonly fabricated to test the material quality after epitaxial growth of a laser structure, two additional specialized features will cause the BALs to operate as broad area laser conjugators (BALCs) herein. Since Petitioner's expertise is relied upon with respect to the stack reflectors design and optical port fabrication, it is asserted that any new invention developed under this Subcontract will likely relate to further improvements or new features which enhance Sarnoff's existing commercial technologies and systems.

Scope of Waiver: It is the purpose of this advance waiver to provide for a waiver of the Government's domestic and foreign patent rights under the authority of 42 USC 2182 and 5908, in accordance with DOE's patent waiver regulations at 10 CFR 784.4. The Petitioner will be able to retain the patent rights to their sole or joint (undivided) subject inventions in accordance with the terms and conditions set forth in 48 CFR 52.227-12 as amended by 10 CFR 784.12. This waiver should be effective over the present Subcontract as well as any follow-on procurements covering similar BALC fabrication work subject to the following conditions. This waiver is subject to DOE's retention of a royalty-free, non-transferable, irrevocable, nonexclusive license to practice any subject invention by or behalf of the U.S. Government anywhere in the world, march-in rights and a preference for United States industry provision comparable to those set forth in 35 U.S.C. 202 and 204. In addition, Sarnoff has agreed to third party (contractor) licensing of background technical data and a U.S. Competitiveness provision, per letter dated June 21, 2001, also attached hereto as Enclosure 2.

Conclusions and Recommendations: Considerations relevant to the grant of the subject advance waiver include whether such grant is necessary to secure the participation of a particular contractor and whether such grant will expedite attainment of the purposes of the Program. Again, it should be reiterated that Sarnoff was a sole source offeror representing that they were willing to accept and proceed "due to LLNL's urgent need for our immediate support". In accordance with their business model, Sarnoff has stated that "principal or exclusive rights in the subject inventions are needed in order to provide an incentive to compensate for the (prior) investment of funds, effort and facilities". NN-20 believes that these BALCs cannot be economically fabricated piecemeal by the Laboratory and that the Project will not be successful unless these devices are reduced to practice and manufactured in sufficient quantity by industry. Toward this end, Petitioner has said that it "is willing to grant licenses under Sarnoff's patents and technology on terms and conditions sufficiently reasonable to encourage utilization of subject inventions".

Granting of this advance waiver should not have adverse effects on competition or market concentration since there are many active competitors to Sarnoff with significant resources in the field of optoelectronics. The subject invention rights granted by this waiver should serve to enhance competition by encouraging development of new or improved technologies, rather than serving to concentrate markets. The funding for development contributed by DOE under this Subcontract is small in comparison to the more than \$20 million dollars that Sarnoff has spent in past years on telecommunication applications. Since this project is essentially contributing increased funding to an ongoing privately sponsored development program, DOE's statutory waiver considerations are viewed as being substantially met.

Accordingly, in view of the statutory purposes of DOE waiver policy, and the objectives of the Nonproliferation Research and Engineering Program, and in view of the factors to be considered under DOE's statutory patent waiver policy, all of which have been considered, it is determined that the advance waiver set forth above will best serve the interest of the United States and the general public. It is therefore recommended that this waiver be granted.

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Based on the forgoing Statement of Considerations, it is determined that the interest of the United States and the general public will best be served by waiver is granted. This waiver shall not affect any patent waiver previously granted. This waiver shall apply to a modification or extension of this Subcontract where, through such modification or extension, the purpose or scope has not substantially been altered.

CONCURRENCE

Robert E. Waldron, Assistant Deputy Administrator for Nonproliferation Research and Engineering (NN-20) **APPROVAL** 

Paul Gottlieb, Assistant General Counsel for Technology Transfer and Intellectual Property (GC-62)

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